

Proper Field Sampling Guide

Overall, proper and traceable sampling is necessary for accurate and accountable laboratory results.

ASTM D 6690, 1190, 3405, 5078 and AASHTO M 324, 173, 301 specifications require laboratory sampling from packaged units of crack sealant. Proper sampling as required by the specifications should be used for all approval processes.

However, some governmental agencies require field sampling from crack sealant melters on a jobsite. This document outlines the recommended procedures for field sampling. The steps outlined below have been found to yield representative field samples in oil jacketed melters. These guidelines are the generally accepted practices for field sampling by most manufacturers in the crack sealant industry. Deviations from these procedures may result in inaccurate testing. Following these procedures does not guarantee a passing laboratory result and does not extend P&T Products' material warranty.

- ◆ Crack sealing equipment must be operated according to the equipment and sealant manufacturers' instructions. Deviations in equipment operation effect the sampling accuracy. Proper operation includes the rate at which the melter is filled, the heating settings, the length of time the sealant is heated, and agitation controls.
- ◆ The contractor must have a single lot of crack sealant that is sufficient in quantity in order to fill the melter at least twice. The product, manufacturer, lot number, and quantity must be recorded by the field inspector. The inspector must mark each pallet examined. A box of the same lot number in the manufacture's original container should also be retained by the inspector.
- ◆ The inspector must confirm the melter is emptied and cleaned before crack sealing operations begin.
- ◆ The melter must be filled at such a rate as to not allow the blocks of crack sealant to coagulate. The melter must be more than half full before field sampling. This reduces the possibility of contamination from sealant remaining in the kettle from a previous job. The inspector will witness the material from the recorded lot number being added to the equipment and shall verify there is no un-melted material or packaging prior to beginning the sealing operation.
- ◆ Heating oil should not exceed 525 F. The material thermometer must be calibrated upon field sampling, or calibration records must be verified. The material temperature must be recorded by the inspector and must be between the manufacturer's recommended pouring temperature and safe heating temperature.
- ◆ Crack sealing must be in operation for at least 10 minutes prior to obtaining a sample. At the time of sampling the equipment agitation must be on. The material sample should be taken through the applicator wand after the sealant has been recirculated for at least 30 seconds back into the melter.
- ◆ The sample size must be sufficient for the required tests. The depth of the sample container shall not exceed 4 inches. In some cases, the application temperature may create more settling in a field sample which can lead to inaccurate lab results when the sample is packaged in taller containers. No part of the sample container shall be melted to combine with the sealant. The Dura-Fiber self release box is an ideal sample container. A minimum of 3 samples shall be taken at each sampling. This allows for retesting and retaining of samples when necessary. Each sample must be labeled in a way it can be traced to the jobsite and the inspection information gathered above. Pouring laboratory testing containers directly from the field melter is not acceptable.

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2/2014

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